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59599395BA

Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type.

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CD(s) containing:

computer program listing

Doc Code: Computer

pages of specification

and/or sequence listing

and/or table

Doc Code: Artifact

content unspecified or combined

Doc Code: Artifact

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Artifact Type Code: P

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Artifact Type Code: S

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Artifact Type Code: U

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Stapled Set(s) Color Documents or B/W Photographs

Doc Code: Artifact    Artifact Type Code: C

☐

Microfilm(s)

Doc Code: Artifact    Artifact Type Code: F

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Video tape(s)

Doc Code: Artifact    Artifact Type Code: V

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Model(s)

Doc Code: Artifact    Artifact Type Code: M

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Bound Document(s)

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Other, description: \_\_\_\_\_

Doc Code: Artifact    Artifact Type Code: Z

The  
United  
States  
of  
America



The Commissioner of  
Patents and Trademarks

*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

*Therefore, this*

United States Patent

*Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.*

*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.*

*Bence Lehman*

Commissioner of Patents and Trademarks

*Ellie M. Person*

Attest

5,771,248

219400924 US1



## Katayama et al.

[45] **Date of Patent:** Jun. 23, 1998

- 5,257,270 10/1993 Hilden et al. .... 371/37.1

- [57]
- ABSTRACT**

Apparatus for recording and/or reproducing user data recorded on a record medium. The apparatus includes record encoder for converting original user data into encoded user data of a predetermined record code and an error correcting code generator for generating original error correcting code data for correcting an error with respect to the encoded user data. A write unit records the encoded user data and the error correcting code on the record medium. A read unit reads the recorded data and the reproduced data is error corrected so as to provide the original user data.

**8 Claims, 25 Drawing Sheets**

